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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,757	11/12/2003	Stephen Y. Chou	PRUN 9237USC1	7832
1688 7590 06/19/2009 POLSTER, LIEDER, WOODRUFF & LUCCHESI 12412 POWERSCOURT DRIVE SUITE 200 ST. LOUIS, MO 63131-3615				
EXAMINER				
TRAN, BINH X				
ART UNIT		PAPER NUMBER		
1792				
MAIL DATE		DELIVERY MODE		
06/19/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/706,757

Applicant(s)

CHOU ET AL.

Examiner

Binh X. Tran

Art Unit

1792

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8, 10-17, 19, 30, 35-47, 49 and 55-60 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8, 10-17, 19, 30, 35-47, 49 and 55-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4-30-2009, and the amendment filed on 5-13-2009 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 59 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 59, the examiner is unable to find the proper support for the new limitation "poly(octyl methacrylate)" in the specification. The examiner recognizes that applicants disclose to use poly methacrylate compound. However, the examiner is unable to find proper support for "poly (octyl methacrylate)"

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-4, 6, 8, 15-17, 19, 30, 35-40, 42-47, 49, 55-56, 58, 60 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3, 7, 14, 19 of U.S. Patent No. 5,772,905 in view of Gebhardt et al. (US 5,731,086).

The independent claims 1, 30, 38, 49 of the present application differ from the claim of US 5,772,905 by further specifying the polymeric composition capable of being deformed by said mold at a temperature of less than 200 °C, wherein the polymeric composition comprises a thermosettable polymeric composition and a photocurable polymeric composition. However, the US patent 5,772,905 clearly discloses the use the thermal plastic polymer which is capable of being deformed by the mold. Gebhardt

teaches to use thermosettable polymer composition and a photocurable composition which is capable of being deformed at 23.5 °C with superior duplication pattern with minimal loss of debossment precision of the grooved pattern (col. 10 lines 1-35, col. 11-12,) or the mixture of thermoset and thermoplastic (col. 26). It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify US Patent 5,772,905 in view of Gebhardt by using thermoset polymer which is capable of being deformed at a temperature less than 200 °C because it has superior duplication pattern with minimal loss of debossment precision of the grooved pattern.

The claims of US 5,772,905 do not disclose the presence of the internal mold release agent. Gebhardt teaches to use release agent in order to enhance the removal process (col. 48 lines 30-40).

Respect to independent claims 1, 30, the claims of US 5,772,905 also fail to disclose photocuring, thermal curing or both thermal curing and photocuring the polymeric composition. Gebhardt teaches to thermally cure and/or photocure the polymeric composition (col. 25 lines 15-59, col. 48 lines 58-67) in order to cure and harden the film. It would have been obvious to one having ordinary skill in the art, at the time of invention to thermally cure and/or photocure the polymeric composition in order to cure and harden the film.

Respect to claims 2, Gebhardt discloses a homopolymer, copolymer, block copolymer (col. 40 line 34-47). Respect to claim 3, 39, Gebhardt teaches the polymer comprises poly (vinylacetate) (See col. 42 lines 57-60, col. 44 lines 45-51).

Respect to claims 4, 40, Gebhardt teaches the use oligomer comprises an epoxy resin (col. 11 lines 5-7, col. 13 lines 38-40, col. 38 lines 50-55). Respect to claim 8, Gebhardt discloses the thermosettable polymer is capable of being deformed at room temperature (col. 10 lines 1-20).

Respect to claims 6, 38, and 42, Gebhardt discloses the polymer comprises a crosslinker including divinyl benzene (col. 25 lines 1-14, col. 39 lines 55 to col. 40 line 5, col. 40 lines 35-48). It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify US Patent 5,772,905 in view of Gebhardt by having crosslinker including divinyl benzene because it will help to toughening the polymer.

Respect to claim 8, Gebhardt teaches the polymer composition is capable of being deformed at room temperature (23.5 °C, col. 7 lines 45-51).

Respect to claims 15-17, Gebhardt also teaches it is possible for the polymer comprises plasticizer, monomer, additive in order to enhance polymer composition at various percentage (col. 42-43, col. 44 lines 44-52, col. 45 lines 53-60, Table in col. 46-47).

Respect to claim 19, US 5,772,905 discloses the pattern dimension less than 200 nm (in claim 1, 14, 19) which overlapping applicant's claimed range in claim 19. Further, it has been held that determination of workable range is not considered inventive.

Respect to claims 35-37, Gebhardt teaches the thermosettable is hardened by a thermal treatment (i.e. curing process) and the photocurable is hardened by UV exposure (col. 11 lines 5-7, col. 25 lines 19-40). It would have been obvious to one having

ordinary skill in the art, at the time of invention, to thermally curing and UV cured the polymer because it helps to harden the polymer.

Respect to claims 43-44, 46-47, Gebhardt disclose the mold imprint at least one layer of multiple layers of composite (Fig 1B-1F, col. 48). The limitation of claim 45 has been discussed above under Gebhardt reference. Respect to claim 55, Gebhardt teaches the thermoplastic polymer comprises poly (vinylacetate) (col. 42 lines 26-60, col. 44 lines 45-52).

Respect to claim 56, Gebhardt teaches the thermoplastic polymer comprises polymer of butyl methacrylate (col. 20 lines 60-64, col. 45 lines 30-35). Respect to claim 58, Gebhardt teaches the thermoplastic polymer comprises polystyrene (col. 45 lines 39-40). Respect to claim 60, Gebhardt discloses the thermoplastic polymer comprises copolymer of vinyl acetate/vinyl chloride (col. 44 lines 50-60).

5. Claims 1-6, 8, 10-17, 19, 30, 35-47, 49, 55-58, 60 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 11/980,918 (published as US 2008/0277826 A1) in view of Gebhardt et al. (US 5,731,086).

This is a provisional obviousness-type double patenting rejection.

The claims of the present application differ from the claim of co-pending application 11/980, 918 by further disclosing the step of photocuring, thermally curing, or both thermally curing and photocuring the polymeric composition. However, claim 1 of co-pending application 11/980,918 clearly disclose the step of solidify the film

comprises of polymeric composition. Gebhardt teaches to thermally cure or photocuring the polymeric composition in order to retain and replicate the pattern (See col. 7 lines 51-57, col. 10 lines 30, col. 25 lines 15-30). It would have been obvious to one having ordinary skill in the art, at the time of invention, to modify copending application 11/980,918 because thermally curing or photocuring the polymeric composition in order to retain and replicate the pattern.

Response to Arguments

6. The applicant's amendment is sufficient to overcome the examiner's previous ground of rejection under 35 USC 112, 2nd paragraph.

Respect to previous obviousness-type double patenting rejection, the applicants state "The Examiner acknowledges that the claims of the '905 patent "do not disclose the present internal release agent" (Office Action, p. 5), but argues that Gebhardt "teaches to use release agent in order to enhance the removal process" (citing Gebhardt, Col. 48, lines 30 - 40). But the cited portion of Gebhardt refers to coating a foil sheet with a release agent, i.e., a metal layer is coated with an external release material. This coated metal is remote from a polymeric composition including an internal mold release material as called for by the pertinent claims." The examiner disagrees. Gebhardt clearly teaches to use a release agent in order to enhance the removal process of the foil sheet 14 from the thermoset (11) and the process tool 13 (i.e. a mold), wherein the release agent is polymer (See fig 1C and 1D, col. 48 lines 30-40). The examiner still maintains that it is obvious to use the release agent as taught by Gebhardt. There is no limitation in the claim which exclude the present of the foil sheet.

Respect to the new claim 59, the examiner provides a new ground of rejection under 35 USC 112, 1st paragraph because the examiner is unable to find proper support for this limitation in the specification.

The examiner also provides a new a provisional obviousness-type double patenting rejection as discussed above.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh X. Tran whose telephone number is (571)272-1469. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nadine Norton can be reached on (571) 272-1465. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Primary Examiner
Art Unit 1792

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